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NOTE BY THE SECRETARY-GENERAL

The Secretary-General has the honour to transmit to the Security Council a report submitted by the Executive Chairman of the Special Commission established by the Secretary-General pursuant to paragraph 9 (b) (i) of Security Council resolution 687 (1991).

Enclosure

Letter dated 24 October 1991 from the Executive Chairman of the Special Commission established by the Secretary-General pursuant to paragraph 9 (b) (i) of Security Council resolution 687 (1991) addressed to the Secretary-General

I have the honour to refer to the session of the Special Commission established by the Secretary-General pursuant to paragraph 9 (b) (i) of Security Council resolution 687 (1991), which was held at United Nations Headquarters from 21 to 23 October 1991. In the course of its work, the Special Commission had before it a report submitted by me as Executive Chairman on the activities undertaken by the Special Commission in the initial five months of operational activities under section C of Security Council resolution 687 (1991). The Commission agreed that my report should be transmitted to you with the request that it be circulated as a document of the Security Council.

(Signed) Rolf EKEUS
Executive Chairman
Office of the Special Commission

Annex

Report by the Executive Chairman of the Special Commission established by the Secretary-General pursuant to paragraph 9 (b) (i) of Security Council resolution 687 (1991)

A. SCOPE OF THE REPORT

1. Six months have elapsed since the adoption by the Security Council on 3 April 1991 of its resolution 687 (1991). Pursuant to section C of that resolution the Special Commission (UNSCOM) was established to perform the functions assigned to it in that section. These relate to the elimination of Iraq's weapons of mass destruction and the means of their production as well as to ensuring that the acquisition of such weapons is not resumed in the future. Pursuant to his executive responsibilities, the present report is presented by the Executive Chairman to give an account of the initial five months of operational activities.

2. This is the first comprehensive account of the work undertaken to implement section C of Security Council resolution 687 (1991) and subsequent related resolutions. Consequently, it touches upon the establishment, composition, organization, mandate and financing of the Special Commission, as well as its operational activities in the chemical, biological and ballistic missile fields and its responsibilities in the nuclear field. Where necessary, separate appendices deal with these various aspects. The report highlights significant issues. It also gives the Executive Chairman's assessment of the results achieved, the difficulties encountered and what remains to be done to secure full implementation of the requirements of the Security Council resolutions.

B. SERVICING OF THE SPECIAL COMMISSION

3. Immediately upon the establishment of the Special Commission as a subsidiary organ of the Security Council, steps were taken to set up a small, full-time secretariat to assist the Executive Chairman in the exercise of his functions. The secretariat is stationed principally at United Nations Headquarters in New York, with a field office in Bahrain and a support office at Baghdad. The Bahrain office serves as the staging area for the assembly, briefing and report writing of inspection teams, while the Baghdad office provides the required logistical support in the field. The secretariat has been assisted in its work by members of the Commission. Other staff have been provided by Governments, the United Nations Secretariat, in particular the Department for Disarmament Affairs, and the World Health Organization (WHO). Inspection teams have consisted of personnel made available by Governments, members of the Commission, the United Nations Secretariat, WHO and, in the nuclear field, by inspectors and staff of the International Atomic Energy Agency (IAEA). In composing the teams, selection was principally based upon

the technical qualifications and expertise of the inspectors with due regard to drawing the members of inspection teams from as many Member States as possible within the range of available capabilities and experience. Nationals of 34 countries have so far served on inspection teams. In briefing team personnel on their assignments, attention is drawn to their responsibilities as experts on mission for the United Nations acting under a mandate from the Security Council. Further information on the Special Commission and the functions of the secretariat is contained in appendix I to the present report.

4. The Executive Chairman wishes to place on record his profound appreciation to the Secretary-General, to Governments and to the agencies concerned for the assistance made available as well as to the able staff placed at his disposal for the dedicated service they have rendered, sometimes in very trying and dangerous circumstances, to carry out the mandate of the Security Council.

C. STATUS, PRIVILEGES AND IMMUNITIES

5. After extensive and sometimes difficult negotiations, an agreement was concluded with the Government of Iraq concerning the status, privileges and immunities of the Special Commission, the IAEA and United Nations specialized agencies involved in implementation of Security Council resolution 687 (1991). The provisions in the agreement with Iraq are recapitulated, elaborated upon and reinforced in the Special Commission's plan a/ for future ongoing monitoring and verification of Iraq's compliance with relevant parts of section C of Security Council resolution 687 (1991) which was approved by the Council in its resolution 715 (1991) of 11 October 1991. An agreement has also been concluded with the Government of Bahrain in respect of the field office at Manama.

D. PROGRESS MADE

6. The implementation of section C of Security Council resolution 687 (1991) involves what can most conveniently be described as a three-stage process. First, there is the inspection and survey phase, designed to gather the information necessary to make an informed assessment of Iraq's capabilities and facilities in the nuclear, chemical, biological and ballistic missile fields. The second phase is concerned with the disposal of weapons of mass destruction, facilities and other items related thereto through destruction, removal or rendering harmless, as appropriate, as provided for in resolution 687 (1991). Third is the long-term monitoring phase, to ensure ongoing verification of Iraq's compliance with its obligations under section C of resolution 687 (1991). These phases may run concurrently, but they provide a convenient basis for assessing what has been achieved so far.

7. At present, it can be said with some confidence that through rigorous and intensive inspections by the Special Commission in the chemical, biological and ballistic missile fields and by IAEA and the Special Commission in the

nuclear field, it has been possible to compile, in the course of the first phase, sufficient information to have a general picture of Iraq's capabilities and facilities in all the areas concerned. However, some important lacunae remain; filling them will be pursued energetically.

8. By the end of October 1991, 20 inspection missions will have been fielded. For a list of the missions, see appendix II to the present report. Thirteen of these missions related to chemical, biological and ballistic missile areas. The other seven missions were nuclear inspection missions undertaken by IAEA with the assistance and cooperation of the Special Commission. Such assistance and cooperation included the provision of persons with expertise in the fields of nuclear weapons, various nuclear energy related technologies as well as special materials. It also included broad logistical support, such as explosive ordnance disposal, information, communications, medical, interpretation and photographic support and financing. Furthermore, the Commission has the responsibility, in the absence of declarations by Iraq, for designating locations for nuclear inspections as well as for all other inspections. Such designations are based on assessments made within the Special Commission, or on information received from interested Member States.

9. In the nuclear field, the IAEA-led inspections have disclosed three clandestine uranium enrichment programmes or activities: chemical, centrifuge and electromagnetic isotope separation as well as laboratory-scale plutonium separation. The sixth nuclear inspection finally obtained conclusive evidence of a nuclear weapons development programme, aimed at an implosion-type nuclear weapon linked to a surface-to-surface missile project. Given the information obtained about the advanced nature of Iraqi efforts to develop an implosion system, it appears that it is the availability of adequate amounts of fissile material that would have been the major factor in determining how soon Iraq could have produced a nuclear device. For example, if Iraq would have started with natural uranium using its electromagnetic isotope separation (EMIS) technology, that time could have been as little as 12 to 18 months. Further information will be found in appendix III to the present report.

10. Subject to confirmation by the completion of the verification phase in the near future, it seems probable that a full assessment of Iraq's chemical weapons capabilities will be achieved. So far Iraq has acknowledged possession of 46,000 pieces of filled munitions. Iraq's facilities include the substantial chemical weapons production complex of the Al Muthanna State Establishment and three planned precursor production plants in the Al Fallujah area. In addition to the central storage of filled chemical munitions, warfare agents and precursor chemicals in bulk at Al Muthanna, filled chemical munitions, often damaged and leaking, are stored at various sites throughout the country. The process of moving these munitions to storage at Al Muthanna prior to destruction has been initiated. Al Muthanna has been designated as the central destruction site for Iraq's chemical weapons. Destruction of filled munitions and bulk agents at Al Muthanna will begin early in 1992 and is expected to continue into 1993. To date, 11,829 unfilled chemical munitions have been destroyed by Iraqi personnel under the supervision of

Special Commission inspectors. Further information will be found in appendix IV to the present report.

11. In the area of biological weapons capabilities, the inspection activities initially focused on the major research and development site at Salman Pak but over 10 additional sites have now been inspected. Conclusive evidence that Iraq was engaged in an advanced military biological research programme has been collected. No evidence of actual weaponization has been found, but the inspections have provided a sound data base for future monitoring of biological capabilities in Iraq. Details are given in appendix IV.

12. In the field of ballistic missiles - those with a range greater than 150 kilometres - the Special Commission inspection teams have supervised the destruction of 62 ballistic missiles, 18 fixed Scud missile launch pads, 10 launchers, 11 decoy missiles, 32 ballistic missile warheads, 127 missile storage support vehicles, a substantial amount of rocket fuel, an assembled 350 millimetre supergun, components for 350 and 1,000 millimetre superguns and 1 tonne of supergun propellant. In addition, inspectors have confirmed the destruction by coalition bombing of several missile repair and production facilities. However, important questions remain unresolved; in particular, a satisfactory accounting for all the relevant missiles obtained or constructed by Iraq, and a full disclosure of plans and progress in future ballistic missile development. Further work is required to obtain a full accounting of Iraq's missile capabilities before the Special Commission can certify that all subject items have been identified. Details will be found in appendix V to the present report.

13. Continuing work on concepts and details of compliance monitoring, in conjunction with IAEA, has resulted in the development of plans for long-term monitoring in the chemical, biological and ballistic missile areas and, separately, on nuclear monitoring. Although these two plans were initially drawn up separately, the drafts have as far as possible been harmonized by the Special Commission and IAEA. A notable factor in the preparation of the plans has been the cooperation from and the inputs submitted by various Governments. Monitoring and verification under the Special Commission's plan will need to cover not only military but also civilian sites, facilities, material and other items that could be used or activities that could be involved in contravention of Iraq's obligations under Security Council resolution 687 (1991). In order to ensure Iraq's compliance with these undertakings, the Special Commission, pursuant to resolutions 687 (1991) and 707 (1991) will, through inspections and aerial overflights, as well as the provision of information by Iraq, monitor and verify these activities, sites, facilities, material and other items.

14. In sum, the activities of the Special Commission and IAEA have been highly effective in the period under review, particularly taking into account that five months ago the Commission was without staff, resources and plans of operation and was required to build up from the very beginning the infrastructure required for its functioning. Account must also be taken of the magnitude of the task with which the Special Commission and IAEA have been

faced, given the scope and variety of Iraq's efforts to conduct research and, in certain areas, to produce weapons of mass destruction. These efforts, particularly in the nuclear field, have consumed a significant portion of Iraq's expenditure of billions of dollars derived from its oil revenues, as indicated to the Executive Chairman in his meeting with the Deputy Prime Minister of Iraq, Mr. Tariq Aziz, at Baghdad, on 5 October 1991, when the Deputy Prime Minister, while denying acquisition of nuclear weapons, admitted research in this field.

15. The accomplishments of the Special Commission and the inspection teams, which are described briefly in paragraphs 9-13 above, are thus remarkable. The activities undertaken have resulted in a situation, of significance for the future, where:

(a) Regarding chemical weapons and biological weapons capabilities, a comprehensive data base will shortly be at hand;

(b) In the ballistic missile field, it would also seem that a comprehensive understanding should be within reach, even if further inspections and analysis are required to be able to state with full confidence that a complete disclosure of remaining ballistic missiles has been made by Iraq;

(c) In view of the lack of full cooperation by Iraq and its persistent concealment efforts, a complete disclosure of the nuclear weapons programme of Iraq has yet to be made. The sixth nuclear inspection produced important and definitive evidence that much remains to be done;

(d) The Plans for compliance monitoring prepared by the Special Commission (S/22871/Rev.1) and by IAEA (S/22872/Rev.1) have been submitted to the Security Council. They were formally approved by unanimity on 11 October 1991 in Security Council resolution 715 (1991).

E. ATTITUDE OF IRAQ

16. The inspections undertaken have had to be energetic, rigorous and intensive because of the failure of Iraq, particularly in the nuclear field, to adopt the candid and open approach to the disclosure of its capabilities which is called for in section C of resolution 687 (1991). While cooperation from Iraq has generally been forthcoming at the field level - most notably in the chemical and to a degree in the biological areas - in relation to activities and resources declared by Iraq, a totally different attitude of non-cooperation, concealment and sometimes false information has emerged in relation to non-declared activities, resources and sites that have been designated by the Special Commission on the basis of its own assessments or of data supplied to it by States.

17. This has resulted in a number of serious incidents, including those of 23, 25 and 28 June 1991, when a nuclear inspection team was denied access to

certain facilities and, on the latter occasion, shots were fired by the Iraqi military to deter the team from photographing trucks transporting materials previously removed from Iraqi nuclear programme sites. These incidents were reported to the Security Council (S/22739 and S/22743), and resulted in the Council dispatching, at the end of June 1991, a high level mission (see S/22746), composed of the Executive Chairman of the Special Commission, the Director General of IAEA and the United Nations Under-Secretary-General for Disarmament Affairs to meet with the highest levels of the Iraqi Government. This mission received various assurances of full cooperation from the Government, which were confirmed to the Secretary-General (S/22762), but, as the mission reported to the Security Council (S/22761, annex, para. 17), "in spite of their unambiguous character, the general assurances given and the specific measures promised can only be evaluated in the light of present and future implementation by the Iraqi authorities".

18. The misgivings thus expressed by the mission have been amply confirmed by the subsequent conduct of the Iraqi authorities, culminating in the detention of a further nuclear inspection team in a parking lot at Baghdad for four days at the end of September 1991. This serious and material violation by Iraq of its obligations under the relevant Security Council resolutions and its agreement on the status, privileges and immunities of the Special Commission and IAEA does not stand alone. Despite express provisions in the agreement, Iraq refused for almost three months to permit the Special Commission to introduce its own helicopter air-support system into Iraq, a matter that had to be reported to and was the subject of representations by the Security Council (S/23064 and S/23070) and which had to be taken up by the Executive Chairman on a special visit to Iraq early in October 1991. That air-support system is now finally operational in Iraq although certain practical details need to be worked out regarding the most direct flight patterns for particular flights.

19. The elements of misinformation, concealment, lack of cooperation and violation of the privileges and immunities of the Special Commission and IAEA have not created any trust in Iraq's intentions. They have had a negative impact on relations with Iraq and have engendered an atmosphere of profound scepticism, particularly in the nuclear area; this atmosphere has to some degree contaminated the other three areas. It has had for Iraq an effect directly contrary to its professed desire for an early lifting of the sanctions imposed in the relevant Security Council resolutions. It has led to the adoption of Security Council resolution 707 (1991) of 15 August 1991 and it constituted an element that had to be taken most seriously into account in the preparation by the Special Commission and by IAEA of their plans for securing Iraq's future compliance with the provisions of section C of resolution 687 (1991). A change in the attitude of Iraq to one of candour, transparency and cooperation at all levels is probably the one single element that could contribute most substantially to a timely and satisfactory implementation of the mandate of the Special Commission and of IAEA. Only then will it be possible to present a finding by them that Iraq is in substantial compliance with its obligations under section C of resolution 687 (1991).

F. ISSUES FOR THE IMMEDIATE FUTURE

20. The progress made, despite obstacles placed in the way by Iraq, in completing the first stage of activities under section C of resolution 687 (1991), gives increasing urgency to a number of issues, particularly the destruction, removal or rendering harmless of items proscribed by the resolution; the organization and initiation of compliance monitoring; the compilation and provision of information on suppliers of Iraq in the nuclear, chemical, biological and ballistic missile fields; and some critical administrative issues.

1. The issue of destruction

21. The Special Commission established at an early stage a Destruction Advisory Panel to advise on the particularly difficult and hazardous area of chemical weapons destruction. The Panel met on 24-28 June 1991, 5-9 August 1991 and 10-14 September 1991, and has submitted three substantive reports. A small fact-finding mission also visited Baghdad on 11-14 August 1991 for detailed technical discussions with the competent Iraqi authorities on the role of Iraq in the destruction of their chemical weapons munitions, agents, precursors and intermediates. Final decisions on the technologies to be used to destroy Iraqi chemical warfare agents and the extent of Iraqi involvement in the destruction process now require urgent consideration. The decisions made will have to take account of the need to ensure public safety, to enforce acceptable emission standards and to be as far as possible rapid and cost-effective. A second fact-finding mission to Iraq is under preparation in this connection.

22. Another urgent issue relates to the destruction of equipment and support facilities in prohibited weapons programmes. Decisions will have to be taken on a number of dual-use items that have been used or were acquired in order to be used in the prohibited areas. A balance must be found between the requirements of resolution 687 (1991) to destroy, remove or render harmless all such items, on the one hand, and requests from Iraq, on the other, that such items be used for civilian and peaceful purposes. Team leaders have been issued with provisional guidelines in this regard, but these will have to be refined in the light of experience, also taking due note of any changes in Iraq's attitude to cooperation with the Special Commission and IAEA.

2. Compliance monitoring

23. Following approval by the Security Council of the compliance monitoring plans drawn up by the Special Commission and by IAEA, it is now urgently necessary that the organization, detailed procedures and resources required to implement these plans should be developed and emplaced. Included in this implementation programme is the need for a comprehensive data base that will draw together information from various sources. A start has been made on developing this data base and this will be pressed forward with vigour.

3. Information on suppliers to Iraq

24. Another issue of importance is the release from the Special Commission and IAEA of information pertaining to foreign procurement to the Iraqi weapons programmes. Such information, previously acquired sporadically, is now systematically being collected. It indicates a pattern of broad and successful Iraqi procurement efforts in many countries. While many suppliers obviously have carried out perfectly legitimate exports of general purpose or dual-use items, which have thereafter been transferred to weapons programmes, there are also indications of circumvention of national or multinational export controls and non-proliferation regimes. Until information is more complete and a full analysis of the material has been performed, the Special Commission and IAEA have agreed to release specific information only to Governments requesting information on Iraqi procurement efforts in their countries. However, once a comprehensive data base has been obtained and fully analysed, relevant information will be made available to the Sanctions Committee in connection with compliance monitoring. Furthermore, the broader objective of preventing the spread of weapons of mass destruction will require an active and open release policy.

4. Administrative issues

25. Two problems of an administrative nature have faced the Commission from its inception, solutions to which are of crucial importance both for the completion of the current phases and for the implementation of the long-term monitoring plans: these are the staffing and financing of the Special Commission.

26. To date the small staff has been made up of highly qualified experts on loan from Governments and on assignment from other United Nations offices. In the case of experts on loan from Governments, many of them hold positions of high responsibility in their home countries and a pressure is increasingly being felt that they return to their normal work places. In the case of United Nations staff, the same pressure exists from releasing departments for staff on assignment to the Commission. Additionally, because of the press of other responsibilities on the limited human resources of the United Nations Secretariat, there has been and continues to be understandable reluctance to release the personnel identified for staffing the field offices in Bahrain and Baghdad, which, as a result, are still not yet staffed to their full agreed levels. Ways must be found to staff fully the Commission on a more long-term basis at the high level of expertise necessary for it to accomplish its demanding tasks, particularly under the regime for ongoing monitoring and verification.

27. The issue of the financing of the Commission's activities has been complex and controversial. It has been the position of the Secretary-General that, to ensure dependability, the financing of the Special Commission should be secured through the assessment of Member States, and a budget was proposed on this basis for submission to the General Assembly through the Advisory

Committee on Administrative and Budgetary Questions. Approval of a budget through these regular mechanisms has been considered necessary for the establishment of posts other than on a short-term basis for the personnel of the Commission and for long-term obligations of financial resources.

28. However, this course of action was not supported by all Member States and by its resolution 699 (1991) of 17 June 1991, the Security Council called for the maximum assistance, in cash and in kind, from all States to ensure that activities under section C of resolution 687 (1991) were undertaken effectively and expeditiously. The Council also decided that the Government of Iraq should be liable for the full costs of carrying out the tasks authorized by section C, the Secretary-General being requested to submit a report on the most effective means for the fulfilment of Iraq's obligations in this respect. On the basis of that report (S/22792), which expressed the view that the most obvious way of obtaining the necessary financial resources from Iraq would be to authorize the sale of some Iraqi petroleum and petroleum products, the Council, by its resolution 706 (1991), gave such authorization subject to international controls and restrictions, part of the proceeds to be made available for meeting the costs of the Special Commission and IAEA. So far no sales have taken place and thus no proceeds made available.

29. Until these proceeds are forthcoming, the Special Commission's activities are being financed, on an interim basis, from the Working Capital Fund and, as of 1 October 1991, from trust fund sources containing the voluntary contributions from Member States for activities under Security Council resolution 687 (1991), which at this time total $5.5 million.

30. These resources have been supplemented by contributions in kind from Member States, including personnel, land and air transportation, high altitude aerial surveys, communications, chemical and biological protective and detection equipment, medical supplies and ambulances. For further information on the contributions received see appendix VI to the present report. The Executive Chairman is most grateful for all the assistance thus rendered to the Special Commission by Member States. Without it, the progress made in discharging its mandate would have been impossible.

31. However, the Special Commission remains without a formally approved budget, without a guaranteed assurance of the availability of adequate financial resources and without posts for personnel except on a short-term basis. The United Nations Controller has ensured that adequate financing has been available and thus activities of the Commission have not so far been constrained to any serious extent. However, the continuing uncertainty has caused difficulties in long-term planning and staffing. From the present time up to 31 March 1992, it is anticipated that the Special Commission will require funds in the neighbourhood of $79 million. The uncertainties that exist need urgent resolution if the Special Commission is to have the financial and budgetary stability required to implement its responsibilities for the destruction, removal or rendering harmless of Iraq's weapons of mass destruction and to prevent any reacquisition of the same through an effective and timely regime of compliance monitoring as defined in the respective plans of the Special Commission and IAEA.

G. CONCLUDING OBSERVATIONS

32. The success of the Special Commission in carrying out its unique task under section C of resolution 687 (1991) has depended on three factors of crucial importance:

(a) The full political support of the Security Council. The Special Commission is a subsidiary organ of the Council, responsible to it through the Secretary-General. The Council has been kept fully informed of the Commission's activities. Executive summaries of the Special Commission's inspections in the chemical, biological and ballistic missile fields have regularly been made available to the Secretary-General by the Executive Chairman and by the former to the Security Council. Reports by IAEA on its inspections have been circulated in Security Council documents (S/22788, S/22837, S/22986 and Corr.1, S/23112 and S/23122). The Council has also been kept informed of the particular problems and difficulties that have been encountered, and the Council has reacted vigorously and affirmatively. The statement of 27 June (S/22746) whereby the high-level mission was dispatched to Iraq, and Security Council resolutions 707 (1991) and 715 (1991) were adopted unanimously. Finally, the strong position taken by the Council vis-à-vis Iraq during the sixth nuclear inspection when team members were detained by the Iraqi authorities (see para. 18 above) further underlined the Council's full support for the activities of the Special Commission and IAEA;

(b) The support of Governments. The detachment from important positions in various countries of highly qualified experts to serve in the Office of the Special Commission and on inspection missions has been of decisive importance for the implementation of a unique programme of elimination of weapons of mass destruction. Of almost equal importance has been the provision of fixed-wing and rotary-wing air support, vehicles, specialized equipment and materials, logistics and information;

(c) The support of the Secretary-General and of other units of the United Nations Secretariat. The contributions of the Secretariat in experienced personnel, operations, logistics and administration, in particular from the Department for Disarmament Affairs, the Field Operations Division, the Department of Administration and Management, the Department of Conference Services and the Department of Public Information have been characterized by resourcefulness, flexibility and dedication in coping with a new and challenging task. They go a long way to demonstrate the capabilities and potentials of the Secretariat, if financial resources are available, to manage new activities rapidly and efficiently.

33. For the successful continuation of the Special Commission's long-term activities in Iraq, it is imperative that the strong support of the Security Council and the commitment of individual Governments and of the Secretary-General and other units of the United Nations Secretariat be maintained.

Notes

a/ S/22871/Rev.1. See, in particular, paras. 17 and 18 and annex I of the plan.

Appendices to the report

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Appendix I

Establishment, organization and mandate of the Special Commission

A. Establishment

1. By its resolution 687 (1991) of 3 April 1991, the Security Council, acting under Chapter VII of the Charter of the United Nations, established the terms and conditions for a formal cease-fire between Iraq and Kuwait and the Member States cooperating with Kuwait in accordance with Security Council resolution 678 (1990). Section C of resolution 687 (1991) is concerned with the elimination of Iraq's weapons of mass destruction and the means of their production and with measures to ensure that production is not resumed. For these purposes paragraph 9 of section C called for a report by the Secretary-General on the forming of a Special Commission to perform certain tasks assigned to it in the resolution (see paras. 5-10 below). The Secretary-General submitted his report (S/22508) to the Security Council on 18 April 1991, and it was approved by the Council on 19 April 1991 (S/22509). The Secretary-General's report provided for the appointment by him of the Special Commission, headed by an Executive Chairman with a Deputy Executive Chairman to assist the Chairman.

B. Composition

2. The Executive Chairman, the Deputy Executive Chairman and the members of the Special Commission appointed by the Secretary-General are as follows: (a) Executive Chairman: Mr. Rolf Ekéus (Sweden); (b) Deputy Executive Chairman: Mr. Robert L. Gallucci (United States); and (c) members: Mr. Paal Aas (Norway); Mr. Ken Adachi (Japan); Mr. B. N. C. Agu (Nigeria); Mr. Andrzej Badek (Poland); Mr. Bryan C. Barrass (United Kingdom); Mr. Peter von Butler (Germany); Mr. Armando Caputo (Italy); Mr. Ronald Cleminson (Canada); Mr. John Gee (Australia); Mr. Helmut Hönig (Austria); Mr. B. A. Kuvshinnikov (Union of Soviet Socialist Republics); Mr. A. J. J. Ooms (Netherlands); Ms. Marjatta M. Rautio (Finland); Mr. Michel Saint Mleux (France); Mr. Roberto Sanchez (Venezuela); Mr. B. Simandjuntak (Indonesia); Mr. Miroslav Splino (Czechoslovakia); Mr. Emile Vanden Bemden (Belgium); and Mr. Yuan Renfeng (China).

C. Organization

3. The report of the Secretary-General (S/22508) provided that, under the Executive Chairman and the Deputy Executive Chairman, the planning and operational direction of the functions of the Commission should be carried out by a number of groups: biological and chemical weapons; ballistic missiles; nuclear weapons capabilities; future compliance; and operations support. Taking this into account, the Special Commission organized its work as

indicated below. It associated, where appropriate, experts in the fields concerned with members of the Commission on certain groups and on the destruction advisory panel which was set up by the chemical and biological weapons group.

(a) Nuclear/IAEA Group: Mr. B. A. Kuvshinnikov (USSR) (Coordinator); Mr. B. N. C. Agu (Nigeria); Mr. M. Saint Mleux (France); Mr. E. Vanden Bemden (Belgium); and Mr. Yuan Renfeng (China);

(b) Chemical/Biological Weapons Group: Mr. J. Gee (Australia) (Coordinator); Mr. P. Aas (Norway); Mr. K. Adachi (Japan); Mr. B. C. Barrass (United Kingdom); Mr. H. Hönig (Austria); Mr. A. J. J. Ooms (Netherlands); Mr. R. Sanchez (Venezuela); Mr. J. Santesson (WHO); and Mr. M. Splino (Czechoslovakia);

(c) Destruction Advisory Panel: Mr. R. G. Manley (United Kingdom) (Chairman); Mr. K. Flamm (United States); Mr. A. Leblanc (France); Mr. G. Leonov, (USSR); Mr. J. McAndless (Canada); Mr. R. Mikulak (United States); and Mr. J. Santesson (WHO);

(d) Ballistic Missiles Group: Mr. A. Caputo (Italy); and Mr. B. Simandjuntak (Indonesia);

(e) Future Compliance Monitoring Group: Mr. P. von Butler (Germany) (Coordinator); Mr. A. Badek (Poland); Mr. R. Cleminson (Canada); Ms. M. M. Rautio (Finland).

4. Responsibilities for operations support have been vested in the Office of the Executive Chairman of the Special Commission (see para. 3 of the report) at United Nations Headquarters and in the Field Office in Bahrain and the Support Office at Baghdad. The secretariat of these offices, under the direction of the Executive Chairman, carries out the day-to-day verification activities; compiles and analyses information; schedules, plans and organizes inspections and aerial overflights; prepares other field operations; provides general administrative support; ensures liaison with IAEA and the relevant Departments of the United Nations Secretariat; answers inquiries from Governments, the press and the public; and performs such other functions as may be required by the Executive Chairman. In addition to staff seconded by Governments, the total number of regular United Nations staff who will be servicing the Commission when all posts are filled will be 66: 13 Professionals and 53 General Service.

D. Mandate

5. The mandate of the Special Commission is established by the Security Council in paragraphs 9 (b) and 10 of section C of its resolution 687 (1991). By its resolution 699 (1991) of 17 June 1991, the Council confirmed that a 45-day period mentioned in paragraph 9 (b) did not place a time-limit on the activities to be carried out under section C of its resolution 687 (1991).

The mandate of the Commission and its rights were confirmed and clarified by the Council in its resolution 707 (1991) of 15 August 1991. On 11 October 1991, the Council, by its resolution 715 (1991), approved the Special Commission's plan for future ongoing monitoring and verification of Iraq's compliance with relevant parts of section C of Security Council resolution 687 (1991) (S/22871/Rev.1), which provides for the continuation of the Special Commission and for a compliance unit under it to be organized to carry out the monitoring and verification tasks provided for under the plan. At the present time, the plan is not yet operational and thus the mandate of the Commission in the period under review is governed by the pertinent provisions of resolutions 687 (1991), 699 (1991) and 707 (1991).

6. The mandate of the Commission in the period under review has been essentially:

(a) To carry out immediate on-site inspection of Iraq's biological, chemical and ballistic missile capabilities, based on Iraq's declarations and the designation of any additional locations by the Special Commission itself;

(b) To receive from Iraq, possession for destruction, removal or rendering harmless, taking into account the requirements of public safety, of all items specified under paragraph 8 (a) of resolution 687 (1991), including items at the additional locations designated by the Special Commission under paragraph 9 (b) (i) of the resolution and to supervise the destruction by Iraq of all its missile capabilities, including launchers, as specified under paragraph 8 (b);

(c) To provide the assistance and cooperation to the Director General of IAEA required in paragraphs 12 and 13 of resolution 687 (1991);

(d) To consult the Secretary-General in developing a plan for the future ongoing monitoring and verification of Iraq's compliance with paragraph 10 of resolution 687 (1991).

7. Paragraph 8 of resolution 687 (1991), which is directly relevant to the Commission's mandate, provides that Iraq:

> "shall unconditionally accept the destruction, removal or rendering harmless, under international supervision, of:
>
> "(a) All chemical and biological weapons and all stocks of agents and all related subsystems and components and all research, development, support and manufacturing facilities;
>
> "(b) All ballistic missiles with a range greater than 150 kilometres and related major parts, and repair and production facilities."

8. Under paragraphs 12 and 13 of resolution 687 (1991), IAEA is vested with responsibilities in the nuclear area substantially similar to those of the Special Commission in the chemical and biological weapons and ballistic

missile areas. These responsibilities are to be carried out with the assistance and cooperation of the Special Commission. The Commission also has the responsibility to designate locations for nuclear inspections.

9. Under Security Council resolution 707 (1991), it is, inter alia, confirmed that Iraq must notify and obtain prior consent from the Special Commission before any movement or destruction of any material or equipment relating to Iraq's nuclear, chemical or biological weapons or ballistic missile programmes or material or equipment relating to other Iraqi nuclear activities.

10. For the future, by its resolution 715 (1991), the Security Council has entrusted the Special Commission with implementation of the Commission's plan for ongoing monitoring and verification. By the same resolution, the Council, inter alia, requires the Commission to extend, by mutual agreement, its assistance and cooperation to the Director General of IAEA in his implementation of the Agency's plan for ongoing monitoring and verification. The Council further decided by that resolution that the Commission should continue to have the responsibility for designating additional locations for inspection and overflights and should perform such other functions, in cooperation in the nuclear field with the Director General of IAEA, as might be necessary to coordinate activities under the two plans, including making use of commonly available services and information to the fullest extent possible in order to achieve maximum efficiency and optimum use of resources.

Appendix II

List of missions fielded to 31 October 1991

Team	Inspection	Dates
IAEA 1/UNSCOM 1	Nuclear	14-22 May
UNSCOM 2	Chemical	9-15 June
UNSCOM 3	Ballistic missile	30 June-7 July
IAEA 2/UNSCOM 4	Nuclear	22 June-3 July
IAEA 3/UNSCOM 5	Nuclear	6-19 July
IAEA 4/UNSCOM 6	Nuclear	27 July-10 August
UNSCOM 7	Biological	2-8 August
UNSCOM 8	Ballistic missile a/	8-15 August
UNSCOM 9	Chemical	15-22 August
UNSCOM 10	Ballistic missile	18-20 July
UNSCOM 11	Chemical	31 August-9 September
UNSCOM 12	Chemical	31 August-5 September
UNSCOM 13	Ballistic missile	6-13 September
IAEA 5/UNSCOM 14	Nuclear	14-20 September
UNSCOM 15	Biological	20 September-3 October
IAEA 6/UNSCOM 16	Nuclear	21-30 September
UNSCOM 17	Chemical	6 October-9 November
UNSCOM 18	Ballistic missile a/	1-14 October

Team	Inspection	Dates
IAEA 7/UNSCOM 19	Nuclear	11-22 October
UNSCOM 20	Chemical	22 October- 2 November

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a/ UNSCOM 8 and UNSCOM 18 also surveyed and rendered harmless the 350 millimetre and 1,000 millimetre long-range guns and components.

Appendix III

Nuclear issues

(Compiled with the assistance of the International Atomic Energy Agency)

A. Declarations

1. On 6 April 1991, Iraq, by action of its National Assembly, agreed to Security Council resolution 687 (1991). Pursuant to this resolution, Iraq declared on 18 April 1991 that it had none of the nuclear-related items referred to in the resolution, so "monitoring shall remain confined to the materials currently declared and used with the knowledge of, under the supervision of and subject to the safeguards of the International Atomic Energy Agency".

2. On 27 April, in response to a letter from IAEA, Iraq declared various forms of safeguarded enriched uranium and various nuclear-related equipment, laboratories and facilities at Al Tuwaitha and Al Qaim.

3. As a result of findings during subsequent inspections, Iraq declared on 7 July 1991 a large number of activities and facilities characterized as being part of its peaceful nuclear programme. Key among these were three methods for enriching uranium: electromagnetic, centrifuge and chemical exchange.

4. Since then, Iraqi admissions of additional nuclear-related activities and facilities have continued - and inspection work has continued. Very recently, indisputable evidence of an extensive Iraqi nuclear weapons development programme has been obtained.

B. Key findings

5. The key findings of the first two nuclear inspection teams, during whose inspections (IAEA 1/UNSCOM 1 and IAEA 2/UNSCOM 4) the various forms and quantities of IAEA-safeguarded enriched uranium were located, identified and taken into IAEA custody, were as follows (S/22788):

(a) Much equipment and almost all documentation had been removed by the Iraqi authorities from the Al Tuwaitha Nuclear Research Centre;

(b) The Iraqi authorities had destroyed evidence of some of Iraq's activities or obscured it by grading, concrete pouring and other methods;

(c) 2.26 grams of undeclared plutonium had been separated from a safeguards-exempted reactor fuel element;

(d) A hitherto undeclared electromagnetic isotope separation programme had existed for enriching uranium.

6. In the opinion of the inspecting teams, no more than three kilograms of highly enriched uranium could have been produced at Al Tuwaitha, although a high-capacity production programme was planned for the near future.

7. The key findings of the third nuclear inspection team (IAEA 3/UNSCOM 5) during whose inspection Dr. J. Jaffar, Deputy Chairman of the Iraqi Atomic Energy Commission, denied the existence of a nuclear weapons programme, were as follows (S/22837):

(a) Through procurement abroad and/or the mining and processing of indigenous uranium ores, Iraq had built up a large inventory of natural uranium;

(b) On the basis of data provided by Iraq, 15 kilograms of highly enriched uranium could have been produced each year when the electromagnetic isotope separation (EMIS) facility at Tarmiya became fully operational;

(c) An identical facility at Ash Sharqat was 85 per cent complete when it was destroyed during the war;

(d) On the basis of Iraqi disclosures, equivalent efforts had not been devoted to the centrifuge and chemical exchange methods.

8. The key findings of the fourth nuclear inspection team (IAEA 4/UNSCOM 6) were as follows (S/22986 and Corr.1):

(a) On the basis of an Iraqi declaration, under a clandestine programme carried out in violation of its safeguards agreement with IAEA, three grams of plutonium had been separated from irradiated reactor fuel;

(b) Sufficient natural uranium was available to produce annually 15 kilograms of highly enriched uranium using electromagnetic isotope separators;

(c) On the basis of information provided by the Iraqi authorities, centrifuge production was planned to begin in 1991: a 100-machine cascade would have been operating in 1993 and a 500-machine cascade in 1996;

(d) In the opinion of the inspectors, the centrifuge production facility could have built several thousands of centrifuges a year;

(e) Despite Iraqi denials of the existence of a weaponization programme, evidence of activities such as specialized high-explosive testing and items such as exploding bridge wire detonators indicated that a weaponization programme had existed.

9. The key findings of the fifth nuclear inspection team (IAEA 5/UNSCOM 14) were as follows (S/23112):

(a) According to an Iraqi statement, 2.2 tons of heavy water which had been imported had been lost because of bomb damage to the storage tank (inspectors were shown the damaged tank);

(b) The chemical exchange enrichment facilities shown to the team had been thoroughly cleaned, leaving no evidence of the extent of the programme.

10. Preliminary key findings of the sixth nuclear inspection team (IAEA 6/UNSCOM 16) were as follows (S/23122):

(a) Conclusive documentary evidence was found at two facilities that Iraq had had a programme for developing an implosion-type nuclear weapon;

(b) Other documents linked the nuclear weapons development programme to a surface-to-surface missile project;

(c) An extensive weaponization programme had been carried out at Al Tuwaitha and Al Atheer, including work with internal neutron initiators and plans for external initiators, high-explosive components, exploding bridge wire detonators and firing sets for multiple detonator systems;

(d) Some documents indicated the existence of a project to produce a sizeable amount of lithium-6, an isotope contained in natural lithium. The lithium-6 project was part of the overall Iraqi nuclear weapon development programme. Lithium-6 is a key component of thermonuclear weapons and is also the source material to produce tritium, an isotope of hydrogen. Tritium is employed in nuclear weaponry as a "booster" in nuclear weapons and as a component in certain types of neutron initiators;

(e) The development of internal neutron initiators based on plutonium-238 was being contemplated, which provided a rationale for the Iraqi interest in separating plutonium in quantities inadequate for an explosive device;

(f) One- and two-dimensional hydrodynamic codes based on well-known hydrodynamic models had been developed by Iraq and were used in conjunction with Iraqi-developed neutronic codes;

(g) Gaseous diffusion existed as an enrichment method, in addition to the activities declared on 7 July 1991;

(h) Substantial nuclear weapons-related procurement from foreign sources had been conducted;

(i) The Iraqi authorities had devised cover explanations for external purchases, including a country-wide survey of related equipment needed in the civilian sector;

(j) Employee lists indicated that Dr. Jaffar had had the lead technical and administrative responsibility for the nuclear weapons development programme;

(k) Substantial facilities that had been used in the clandestine programme had not been declared.

C. Incidents and problems

11. In addition to the continuing problem of piecemeal revelation of aspects of the nuclear programme, the following incidents stand out:

(a) The concealment of evidence of the EMIS programme went to the extreme of pouring concrete over tell-tale structures and covering the concrete with rubble;

(b) A similar concealment procedure was adopted in the case of chemical facilities where the feed material for the different enrichment processes had been prepared;

(c) Access to designated sites where EMIS equipment was stored was repeatedly denied;

(d) When one of the inspection teams was about to come upon a large quantity of EMIS equipment that the Iraqi authorities were attempting to remove, warning shots were fired in order to impede the team;

(e) Documents collected by inspectors in the course of the sixth nuclear inspection were forcibly confiscated by the Iraqi authorities and some of them were not returned;

(f) The sixth nuclear inspection team was detained for 92 hours during the week of 23 September.

D. Inventory of nuclear materials

12. Apart from the safeguarded inventories declared by Iraq on 27 April 1991 and the initial estimates made by the inspection teams of the potential capability of Iraq's EMIS facilities, no evidence was found of an inventory of highly enriched uranium - and certainly none of a quantity sufficient for making an explosive device.

13. Only a few grams of plutonium are known to have been separated.

E. Plan for the destruction, removal and rendering harmless of nuclear-related items

14. The plan, developed by IAEA, addressed nuclear weapons-usable material separately from other items. Nuclear weapons-usable material cannot be destroyed or rendered harmless in Iraq. Consequently, the plan stipulated that IAEA will take custody of the material and remove it.

15. Other items will be removed, destroyed or rendered harmless as appropriate.

F. Plans for future compliance monitoring

16. The IAEA plan (S/22872/Rev.1) for nuclear monitoring has been closely coordinated with the Special Commission's plan (S/22871/Rev.1) for all other monitoring called for in Security Council resolutions 687 (1991) and 707 (1991). The IAEA's plan takes into account the safeguards agreement concluded with Iraq pursuant to the Treaty on the Non-Proliferation of Nuclear Weapons. It assumes that activities for which the Special Commission is responsible, including site designation and aerial surveillance, will continue in support of IAEA inspections.

17. The plan calls inter alia for:

(a) Unconditional Iraqi acceptance of all inspection rights cited in the plan;

(b) The right to carry out inspections in Iraq anywhere and at any time, with or without advance notice;

(c) The right to install continuous containment and surveillance equipment, including unique identifiers for material or items;

(d) A complete inventory of items and activities in the nuclear field that might be relevant in the development of nuclear weapons and/or in the acquisition of nuclear weapons-usable material;

(e) The advance provision of information on nuclear facility construction and imports of nuclear items that might be relevant to the production of nuclear weapons or nuclear weapons-usable material;

(f) The barring of other States from supplying Iraq with proliferation-sensitive equipment and technology.

18. The extent to which Iraq may engage in any nuclear activity is conditioned by the provisions of section C of Security Council resolution 687 (1991) and of paragraph 3 (vi) of resolution 707 (1991), the latter requiring Iraq to halt all nuclear activities of any kind, except for use of isotopes for medical, agricultural or industrial purposes until the Security Council determines that Iraq is in full compliance with resolution 707 (1991) and paragraphs 12 and 13 of resolution 687 (1991), and IAEA determines that Iraq is in full compliance with its safeguards agreement with IAEA.

Appendix IV

Chemical and biological weapons

1. The first chemical weapons inspection (UNSCOM 2) was a survey of the Al Muthanna State Establishment declared by Iraq as its sole chemical weapons research, development, production and filling facility; some chemical weapons munitions and bulk agents were also stored at this site. Since it had been heavily attacked during the hostilities, it was expected that the site would be in a very hazardous condition, not only because of the presence on site of unexploded ordnance but also to damaged and leaking chemical weapons munitions and bulk chemical weapons agent stores. One important task of the survey team, therefore, was to assess the hazards as well as to make a preliminary assessment of the site and of the Iraqi declaration as a necessary preliminary to a subsequent full, detailed and safe inspection of the site; safety considerations were considered to be a priority during this survey because of their unknown nature, magnitude and extent.

2. Other tasks of this survey team were to include, inter alia, a general description of the Al Muthanna State Establishment; a detailed description of specific areas (identifying any that would require particular attention during the subsequent full inspection); identification of any particular problems likely to be encountered during the subsequent full inspection; any indicators of undeclared activities relevant to Security Council resolution 687 (1991); any factors relevant to the use of the site for the destruction of chemical weapons; and a brief description of the Iraqi chemical weapons munitions present.

3. The following were the principal outcomes of the inspection:

(a) None of the information gathered was significantly at variance with the Iraqi declarations;

(b) No evidence was found at this site for non-chemical weapons activities relevant to Security Council resolution 687 (1991);

(c) The site was in a highly dangerous condition, which would present problems for the subsequent full inspection, currently being carried out by UNSCOM 17 (see para. 22 below);

(d) The site would provide a suitable location for the centralized destruction of Iraq's chemical weapons agents and munitions, but the technical details regarding the destruction of these items, particularly the involvement of Iraqi personnel, remain to be fully defined.

4. The second chemical weapons inspection (UNSCOM 9) consisted of one day at each of three chemical production sites in the Al Fallujah area, two days inspecting the pilot plants at Al Muthanna and one day inspecting the declared storage site at Tammuz (Al Taqqadum) Air Base at Habbaniyah. Discussions with

Iraqi officials during the inspection clarified previous ambiguities about the Al Muthanna State Establishment, also known as the State Enterprise for Pesticide Production (SEPP). These discussions confirmed that the Al Muthanna Establishment comprises the large production complex at Al Muthanna, the three intended precursor production sites at Al Fallujah and the munitions stores at Al Muhammediyat.

5. The inspections of the Al Fallujah sites in general confirmed the Iraqi declarations. Al Fallujah 1 had never been completed and had therefore not been used for the production of chemical weapons-related items. Al Fallujah 2 commenced production of significant quantities of chlorine in mid-1990. Plans for the large scale production of other materials such as PCl_3, $POCl_3$, $SOCl_2$ and other precursors were not realized. Al Fallujah 3 had never been used for the production of chemical weapons agent precursors; instead it had been used for the formulation of pesticides, the active ingredients being imported. Some commercially available chemicals weapons precursor chemicals were found stored at this site. All three sites were extensively damaged by bombing during the hostilities.

6. The Iraqi authorities stated that chemical weapons agents were neither produced nor stored at any of these sites. The team found no evidence which contradicted this statement.

7. The inspections of the pilot plants at Al Muthanna revealed that one had been destroyed by bombing but two were still in a relatively undamaged condition. These two pilot plants were inspected in detail and it was concluded that they could, as proposed by Iraq, be adapted for use as a pilot-scale facility to develop a method for the destruction of the Iraqi nerve agents based on caustic hydrolysis. The team recommended that Iraq should be given permission to carry out the necessary modifications and the relevant process development.

8. In the course of the inspection of Tammuz (Al Taqqadum) Air Base at Habbaniyah, 200 aerial bombs were counted and recorded. Analysis of air samples from two of these bombs, selected at random, confirmed that they contained mustard agent. These findings were consistent with the Iraqi declaration that 200 mustard-filled aerial bombs were stored at this site.

9. The third chemical weapons inspection (UNSCOM 11) visited declared sites at Dujayl, Al Bakr Air Base and the auxiliary Al Matasim Aerodrome, the Proving Ground at Al Fallujah and undeclared sites designated by the Special Commission at Al Fallujah General Headquarters and Al Taji.

10. In the depot at Al Fallujah General Headquarters, which had not been declared as containing any chemical weapons items, chemical protective equipment and related material was found. A variety of grenades containing the riot control agent CS were found but no other chemical filled munitions were found.

11. The team examined the 30 chemical-filled ballistic missile warheads declared by Iraq and found by UNSCOM 8 in the Dujayl area, albeit some 30 kilometres from the location notified to the Special Commission (see appendix V, para. 6). Iraq had informed the Special Commission that 14 of the warheads were of the so-called binary type, filled only with a mixture of isopropanol and cyclohexanol, the organophosphorus component (DF) required to produce the nerve agent being added only immediately prior to use. The resulting agent would have been a mixture of the nerve agents GB and GF. Fifty-six plastic containers filled with DF were also found; these bore evidence of extensive leakage. Iraq stated that the other 16 warheads were filled with a mixture of nerve agents GB and GF. Analysis of samples taken from the binary warheads, one of the nerve agent filled warheads and DF container, by laboratories outside Iraq confirmed the Iraqi declarations. Iraq was instructed by the team to transport the warheads to Al Muthanna for disposal.

12. At Al Bakr Air Base 25 type 250 gauge aerial bombs and 135 type 500 aerial bombs filled with mustard agent had been declared by Iraq. These were found at Al Matasim Aerodrome, an airfield auxiliary to the Al Bakr Air Base, situated about 30 kilometres to the north of the Base, they had evidently developed internal pressure since four had already burst spontaneously and mustard agent vapour was detected at the site, necessitating the use of full individual protective equipment when working close to the bombs or downwind of them. Samples were taken from four of the bombs, which were then resealed. Iraq was instructed to transport the bombs to Al Muthanna subject to strict safety precautions and after venting the excess pressure. No other chemical items were found at this site.

13. The site of Al Taji is a large military installation which had been declared in connection with ballistic missiles but not for chemical weapons. Approximately 6,000 empty aluminium containers intended for filling with nerve agent and insertion into 122 millimetre rocket warheads were found. No other chemical items were found at Al Taji.

14. At the Al Fallujah Proving Ground, Iraq had declared the storage of 6,394 mustard-filled 155 millimetre artillery shells. These were seen by the inspection team essentially in accordance with the declaration. They were stored in the open and appeared to be in good condition. Analysis of samples taken from four of the shells confirmed the presence of mustard agent. No evidence was found of any other activities or material relevant to Security Council resolution 687 (1991).

15. In discussions with Iraqi officials towards the end of the inspection contradictory statements were made regarding the marking of chemical munitions. Iraqi officials also failed to respond satisfactorily to requests for information on Iraq's past chemical weapons programme, particularly as regards foreign suppliers of munitions, equipment and precursor chemicals.

16. The two primary tasks of the fourth chemical weapons inspection (UNSCOM 12) were to direct the destruction, by Iraqi personnel, of all unfilled chemical weapons munitions currently at Al Muthanna and to reconnoitre, select and show to Iraqi officials the locations at Al Muthanna where bulk agents, chemical munitions and intermediate, precursor and other chemical weapons-related chemicals would be collected and the locations where future destruction operations would be carried out. These objectives were successfully achieved, although not without incident.

17. The destruction operations were successful. A total of 8,157 unfilled chemical weapons munitions, consisting of six different varieties of bombs, 155 millimetre artillery shells and 122 millimetre rocket warheads were destroyed either by crushing with a bulldozer or cutting with an oxyacetylene torch. Subsequently, parts of chemical munitions and 3,672 122 millimetre rocket warheads were destroyed. Dies used for making bombs remain to be destroyed.

18. During this destructive work, a supposedly unfilled 122 millimetre rocket warhead burst and a nearby Iraqi worker was exposed to nerve agent. Owing to the prompt action of a member of the inspection team (Lieutenant Colonel T. Van Erp, Netherlands) the casualty was very quickly taken to the site hospital where he received appropriate and timely treatment from Iraqi medical personnel. He recovered over a period of a few days. There were no other casualties but the incident illustrates that Al Muthanna is still an extremely hazardous site and that the recovery and destruction of Iraq's chemical weapons munitions (and agents) will be a protracted and dangerous undertaking.

19. A separate incident occurred in the case of the 30 chemical-filled ballistic warheads removed to Al Muthanna from Dujayl in two separate shipments. In the first shipment, 14 warheads stated by the Iraqis to be filled with the mixture of alcohols, and considered relatively harmless, were moved. Ten were opened, found to contain the alcohols and were drained preparatory to destruction. At this point the senior Iraqi official present said that the remaining four were filled with the nerve agent sarin. Apparently these warheads had been moved during the night prior to dispatch to Al Muthanna and the sarin-filled warheads had been confused with alcohol-filled ones. All 20 remaining warheads are now being treated as sarin-filled until proved otherwise. This was potentially a very serious incident, as the warheads were upwind of a number of Iraqi workers and UNSCOM inspectors.

20. Iraq has declared 6,120 sarin-filled 122 millimetre rocket warheads and their attendant motors. They are stored in the open but have not been counted nor have their contents been verified. They present a significant hazard both from the point of leakage of sarin and instability of the rocket propellant. In order to improve safety the Iraqis were directed to move the warheads to the designated storage area; the rocket motors were to be separated and moved to another storage area separate from the warheads. They will remain in these locations until both warheads and motors have been separately counted and verified.

21. A suitable storage location at Al Muthanna for chemical weapons agents and munitions was identified and the Iraqi officials briefed and given detailed maps of the area. Four possible destruction sites were identified.

22. The fifth chemical weapons inspection (UNSCOM 17) began on 6 October and is expected to continue until 9 November. The large team - over 50 persons - is conducting a detailed and full survey of Al Muthanna in preparation for the destruction phase.

23. The sixth chemical weapons inspection team (UNSCOM 20) entered Iraq on 22 October and will inspect several sites, including some that are widely separated. It will need to make use of the United Nations helicopters in order to complete its tasks in the time allocated.

24. Cooperation by the Iraqis with all the inspection teams has been variable but, in general, it has been good.

25. The first biological weapon inspection (UNSCOM 7) carried out a full, detailed inspection of the site at Salman Pak. There were also detailed technical discussions with Iraqi officials.

26. Although Iraq had previously denied possession of biological weapons and any related items, Iraqi officials admitted on the team's arrival in Iraq to having carried out to a programme of biological research for military purposes which, it was made clear, could have been used for both defensive and offensive purposes. The micro-organisms involved were Clostridium botulinum, Clostridium perfringens and Bacillus anthracis. Iraqi officials informed the team that the research programme had commenced in mid-1986 and had been terminated in August 1990, at which point, it was claimed, all stocks had been destroyed. At a subsequent stage in the inspection, however, the team was given bacterial seed stocks which indicated that Iraq had also possessed the following micro-organisms which are considered as biological warfare agents - Brucellus abortus, Brucella melitensis, Francisella tularensis and various strains of Clostridium botulinum. In addition, three simulants of biological warfare agents were provided by Iraq; these were Bacillus subtilis, Bacillus cereus and Bacillus megaterium. No biological weapons or evidence of weaponization was found.

27. The second biological inspection (UNSCOM 15) visited 10 different declared and undeclared sites. Four of these were inspected without advance notice. These 10 sites included a pharmaceutical plant, a blood bank, vaccine production facilities and research and development laboratories with fermentation capabilities and specially designed facilities to enable work with hazardous disease-causing organisms of humans and animals to be carried out.

28. No biological weapons or facilities for filling weapons were found. However, the inspection team unanimously agreed that the Iraqi biological weapon programme, which consisted of a research component at Salman Pak, logically would have included a plan for a development and production component.

Appendix V

Ballistic missiles and long-range guns

1. Five ballistic missile teams have conducted inspections in Iraq to make an inventory, identify for destruction, and monitor the destruction of all declared ballistic missiles with a range greater than 150 kilometres, related parts and components and all research, development, support and manufacturing capabilities. Ballistic missile inspection planning centred on the inspection and destruction of the declared items, the production facilities, and the fixed launch structures in the Western Zone of Iraq.

2. Destruction of ballistic missiles began with the first inspection team's activities in July 1991 before a comprehensive destruction policy had been established. The first team (UNSCOM 3) carried out the initial inventory and supervision of the destruction of all declared missiles, launchers and support equipment, visiting seven different sites and facilities. Missile systems and components destruction was primarily a straightforward task of crushing by bulldozers readily carried out by the Iraqis. Three of the sites were former production and repair facilities that had been destroyed by coalition bombing.

3. The second ballistic missile inspection (UNSCOM 10) was conducted in mid-July on short notice to investigate information suggesting additional undeclared missiles and support equipment. This team found undeclared decoy missiles and additional support equipment in the vicinity of a site previously inspected by the first ballistic missile team. These were also destroyed.

4. Subsequent inspections of production and repair facilities encountered less enthusiastic cooperation and outright disagreement on destruction of some equipment and structures. In July, the Iraqis finally acknowledged possession of a long-range "supergun" and components to build additional and larger calibre weapons. This type of gun was capable of delivering prohibited munitions beyond 150 kilometres.

5. The third ballistic missile team (UNSCOM 8) in August conducted inspections focusing on declared and undeclared suspected ballistic missile production facilities. In addition, a survey of the declared supergun, propellant and unassembled parts at three different sites was undertaken. A significant number of documents and blueprints related to the construction and development of this system was provided to the inspection team. The information obtained and photographs taken were collected for study and use in a planned later inspection/destruction activity.

6. Production, repair and test equipment and machinery associated with the Scud, Al Hussein and Badr 2000 missiles were inspected and identified for destruction at five declared and seven undeclared sites. All sites suffered damage during the coalition bombing, some extensively, with structures and equipment being completely destroyed or damaged with others virtually intact. Identification for destruction of specific missile tooling and test equipment

was readily accepted by the Iraqis. Machinery and equipment identified for destruction which also had non-missile application (dual use) or use in missile systems not prohibited by Security Council resolution 687 (1991) generated vigorous controversy and opposition. This equipment was sealed and guidance was requested from the Special Commission. An inventory was made of all other equipment to enable the Special Commission to decide on its destruction, removal or rendering harmless in consonance with the policies being developed by the Commission in these respects. After return of the inspection to New York, the destruction of certain equipment was called for in a letter to the Iraqi Government based on the inspection report and the provisional guidelines on destruction, removal or rendering harmless initiated by the Special Commission (see para. 21 of the report).

7. At one undeclared site, the team discovered an additional 187 Scud fuel, oxidizer and starter storage tanks. The team also found 30 Scud warhead canisters containing chemical filled warheads on the same vicinity (see appendix IV, para. 11). Although the warheads had been declared to the Special Commission, they were not at the location specified in the declaration. Upon completion of this inspection Iraq provided the team with a declaration of additional Scud fuel and oxidizer storage tanks.

8. The fourth ballistic missile team (UNSCOM 13) planned to inspect in September declared fixed launch sites in the Western Zone as well as other undeclared possible missile support facilities using United Nations helicopters in accordance with the provisions of Security Council resolutions 687 (1991) and 707 (1991). Upon arrival in Iraq the team was advised that inspection of the Western Zone using United Nations helicopters would not be permitted. In the expectation that Iraq's approval would be forthcoming before the end of its inspection period, the team was directed by the Executive Chairman of the Special Commission to undertake inspection of the Western Zone only with the use of United Nations helicopters. In the interim the team inspected the destruction of Scud fuel and oxidizer storage tanks located during the third inspection. The oxidizer tanks were leaking toxic level emissions prompting the team to abandon this site until air quality at the site was acceptable. Two inspections at undeclared sites were conducted. Although no missile activity was noted at one facility, at the other site the team found four previously destroyed missile transport vehicles from Al Taji which had been spot welded together and moved to that location. An additional undeclared Scud missile storage support/carrier was observed. All items were destroyed and verified. In the absence of Iraqi agreement to use by the Special Commission of United Nations helicopters, the team's mission was terminated at this stage, and it did not undertake the planned inspection of the Western Zone.

9. Immediately following the resolution of the helicopter issue in the first week of October, the fifth ballistic missile team (UNSCOM 18) successfully conducted inspections of the fixed launch sites in the Western Zone. Although Iraq declared 25 out of a total of 28 as destroyed, additional destruction was prescribed and carried out. A number of partially constructed fixed launch sites were inspected at undeclared sites and destruction procedures agreed

upon; destruction has still to be verified. The team also returned to the supergun and supervised the destruction of the gun in the Jabal Hamryn mountains north of Baghdad as well as the propellant for the supergun located south of Baghdad. The destruction of the other supergun components at Iskanderiyah has commenced but is not yet completed and will have to be verified later. Several undeclared sites were inspected and found to contain no observable ballistic missile activity.

10. The geographical areas to be covered and the numbers and extent of military and other installations are large. The Special Commission has yet to be convinced that it has obtained a comprehensive assessment of Iraq's ballistic missile capabilities. Future ballistic missile inspection activities will monitor the destruction of outstanding items identified and inspect various sites to complete the information missing on the ballistic missile programme, both the Scud related systems and the system believed to be associated with the nuclear weapon development.

Appendix VI

Voluntary contributions to the Special Commission

1. Voluntary contributions in cash and in kind, as listed below, have been received to date:

Type	Government	Amount (United States dollars)	Remarks
In cash	Japan	2 500 000	From a trust fund
	United States	2 000 000	
	Kuwait	1 000 000	
In kind:			
(a) Outright grant	Norway		15 vehicles 5 satellite global positioning system units 2 ambulances
	United States		7 vehicles 4 trucks 2 ambulances
(b) Loaned for the duration of the operation	Finland		2 gas chromatographs
	New Zealand		Medical equipment
	Sweden		Decontamination equipment, chemical weapons protective equipment
	United Kingdom		Laboratory equipment, including a gas chromatograph mass spectrometer and an infrared spectrophotometer

Type	Government	Amount (United States dollars)	Remarks
			2 biological weapons agent detection kits
			6 chemical weapons agent vapour monitors
(c) Loaned and returned	Belgium		Medical equipment
	Canada		Global positioning system
	France		Medical equipment
	Germany		Explosive ordnance equipment
	Netherlands		Chemical weapons analysis equipment
	United Kingdom		Vehicles

Personnel

2. In addition to personnel seconded by the United Nations, the IAEA and WHO, the following Governments have provided personnel services for inspection-related activities: Australia, Austria, Belgium, Canada, Czechoslovakia, Finland, France, Germany, Greece, Hungary, India, Indonesia, Italy, Japan, Netherlands, Norway, New Zealand, Romania, Sweden, Switzerland, Thailand, United Kingdom of Great Britain and Northern Ireland, United States of America, and Union of Soviet Socialist Republics.

3. New Zealand has provided a medical team.

Air support

4. The Commission has been provided with high altitude reconnaissance flights over Iraq. The flights are undertaken on a regular basis by an aircraft with crew and support personnel made available to the Commission by the United States. Flights are directed by the Special Commission. They are notified to Iraq 72 hours in advance and acknowledged by Iraq within 48 hours.

5. The German Government has provided the Commission with two C-160 transport planes, based in Bahrain, and three rotary-wing aircraft, including crews and support personnel, based at the Al-Rashid airfield at Baghdad since 1 October 1991.